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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,725	03/19/2004	Charles L. Armstrong	38-21(52947)	2724

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MONSANTO COMPANY
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ATTENTION: GAIL P. WUELLNER, IP PARALEGAL, (E2NA)
ST. LOUIS, MO 63167

EXAMINER

ROBINSON, KEITH O NEAL

ART UNIT	PAPER NUMBER
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1638

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/708,725

Applicant(s)

ARMSTRONG ET AL.

Examiner

Keith O. Robinson, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 and 19-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The withdrawal of claims 6-10 and 19-27, filed November 6, 2006, have been received and entered in full.
2. Claims 1-5 and 11-18 are under examination.

Response to Arguments

3. Applicant's arguments, see page 5, 2nd paragraph to page 7, end of 2nd paragraph of 'Remarks' filed November 6, 2006, with respect to the 35 U.S.C. § 112, first paragraph rejection for lack of enablement of claims 1-4, 11 and 13-18 on pages 2-4 of the Office Action mailed May 4, 2006, have been fully considered and found persuasive. The rejection has been withdrawn.

Claim Rejections - 35 USC § 103

4. Claims 1-5 and 11-18 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al (U.S. Patent Application Pub. No. US 2002/0188965, December 12, 2002), in view of Jia (U.S. Patent 5,770,788, June 23, 1998). The rejection is repeated for the reasons of record as set forth in the Office Action mailed May 4, 2006 (see pages 4-6). Applicant's arguments, filed November 6, 2006, have been fully considered but are not persuasive.

Applicant argues that one of skill in the art would not be motivated to combine the cited references because one skill in the art would have been taught that colchicine treatment was effective in treating and inducing chromosome multiplication in haploid

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microspore tissue under conditions specific for microspore tissue (see page 8 of 'Remarks' filed November 6, 2006).

This is not persuasive. Applicant's assertion that Jia teaches culturing anthers or pollen does not preclude one skill in the art to use the teachings for sporophytic tissue. The Jia reference was used to show the teaching of the use of colchicine to produce dihaploid tissue from haploid tissue and the regeneration of a dihaploid plant from the dihaploid tissue (see page 5, 5th paragraph of the Office Action mailed May 4, 2006). In addition, the Zhao et al reference teaches a method of obtaining transformed maize plants comprising obtaining a haploid sporophytic tissue (see page 5, 3rd paragraph of the Office Action mailed May 4, 2006).

See *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) where it states, "[a] reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem". In this instant, though Jia teaches microspore culture and treatment with colchicine, one skilled in the art would understand that the use of colchicine could be used to convert haploids to dihaploids regardless of the tissue used.

See *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993); and *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003) where it teaches "where the general scope of a reference is outside the pertinent field of endeavor, the reference may be considered analogous art if subject matter disclosed therein is relevant to the

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particular problem with which the inventor is involved". In the instant case, the use of colchicine to produce dihaploid tissue as taught by Jia is relevant to the particular problem.

5. Claims 1-5 and 11-18 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Dormann et al (U.S. Patent No. 6,316,694, November 13, 2001). The rejection is repeated for the reasons of record as set forth in the Office Action mailed May 4, 2006 (see pages 6-7). Applicant's arguments, filed November 6, 2006, have been fully considered but are not persuasive.

Applicant argues that the cited reference does not teach the transformation of a haploid sporophytic tissue and the production of a dihaploid tissue from a transformed sporophytic tissue (see page 9 of 'Remarks filed November 6, 2006).

This is not persuasive. Though the cited reference does not teach the transformation of haploid sporophytic tissue and the production of a dihaploid tissue from a transformed sporophytic tissue, it does teach the transformation of embryogenic microspores and the duplication of haploid microspore genome using colchicine (see column 2, lines 62-67 and column 4, lines 37-42, respectively). Thus, one of ordinary skill in the art would understand that transformation can be used with different types of tissue and colchicine can be used to convert haploids to dihaploids. See *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993); and *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003) where it teaches "where the general scope of a reference is outside the pertinent field of endeavor, the reference may be considered

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analogous art if subject matter disclosed therein is relevant to the particular problem with which the inventor is involved”.

Applicant argues that one of skill in the art reading the cited reference would not have a reasonable expectation that transformation of a haploid sporophytic tissue would be obtainable, much less successful (see page 9 of ‘Remarks’ filed November 6, 2006).

This is not persuasive. Though the cited reference teaches transformation of microspores, it does not state that transformation cannot be done with sporophytic tissue and Applicant has not provided any evidence to suggest such an assertion. Applicant’s assertion that the cited reference teaches away from the transformation of a haploid sporophytic tissue is incorrect because the cited reference does not teach that transformation of a haploid sporophytic tissue cannot be done nor is there any evidence in the cited reference or produced by Applicant showing that it cannot be done.

Conclusion

6. No claims allowed.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith O. Robinson, Ph.D. whose telephone number is 571-272-2918. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Keith O. Robinson, Ph.D.
January 16, 2007

DAVID H. KRUSE, PH.D.
PRIMARY EXAMINER
